ENGINEERING SERVICES PROPOSAL

PREPARED FOR

MUNICIPAL ASSOCIATION OF SOUTH CAROLINA

ENGINEERING SERVICES FOR VARIOUS PROJECTS AND ON CALL SERVICES

October 17, 2022

HANNA ENGINEERING

Jake Broom
Chief Operating Officer, MASC
PO Box 12109
Columbia, SC 29211
jbroom@masc.sc

Re: Engineering Services for Various Projects and On Call Services

Hanna Engineering is pleased to submit our proposal for providing Professional Engineering Services for the Municipal Association of South Carolina. Our company was formed in July 2013, but our staff has been involved in public sector water and wastewater projects in South Carolina for the past 39 years. Michael Hanna is the sole owner and Chief Engineer in the company, which is organized as a Limited Liability Corporation with 14 employees. We are located at 2412 Pisgah Road in Florence, and we also have a satellite office in Myrtle Beach.

We are proud of our staff's reputation for providing quality work that is supported by an extremely high ratio of repeat clients. While we do provide a variety of other services, our core focus is and always has been serving the public sector as consultants performing design, bidding, award and construction observation and administration services on all types of water and sewer projects. As a result, our team has extensive, specialized experience in the types of projects described in the RFQ and have worked on over 100 similar projects as a Firm in the past 9 years. This experience includes everything across the spectrum of project planning, funding procurement, design & permitting and construction observation & administration. We have also been involved in more than 60 local, state and federally funded projects in recent years and have the in-depth knowledge and experience required to fully support clients on projects receiving funding through ARPA, RIA, CDBG, RD, SRF, etc.

Our approach and philosophy are centered around long-term sustainability. Our goal in every client relationship is to seek to first understand their needs and priorities and then to design and manage projects in a way that is conducive to meeting those needs and priorities. Additionally, our goal is to not just work for our clients, but *with* them. In serving small to medium sized municipalities, we become an extension of their staff, being called upon to help with tasks as needed while bringing decades of experience to bear on the day-to-day challenges and opportunities that arise for our clients. We look forward to the potential opportunity to serve more clients through this endeavor.

Sincerely,

Hanna Engineering, LLC

Michael H. Hanna, P.E.
President

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PROJECT APPROACH

Hanna Engineering has developed an effective approach to executing water and sewer projects with a staff that is best known for their ability to work **with** the Client and not just work **for** the Client. We pride ourselves in being an extension of the Client's staff and can be called upon 24 hours per day and 7 days per week to answer questions and help address problems. Hanna Engineering's design philosophy is centered around sustainability. Through careful planning and evaluation of long-term impacts, we design projects that will meet our clients' current needs while also moving towards future sustainability and maximizing the system's overall efficiency by implementing the best technology and practices. We feel that this type of design is essential in order to minimize the Client's long-term operation and maintenance costs, to prevent future regulatory violations and to be good stewards of our environment and the resources it provides. With regards to construction observation, we believe that visiting the site 'occasionally' during construction does not constitute true construction observation. Rather, construction observation involves frequently visiting the site each week during construction and working closely with the contractor to ensure project plans and specifications are being followed accurately. This approach minimizes problems that would otherwise arise years later as a result of faulty workmanship or deviations from project documents.

Having focused on water and sewer projects since our Firm's inception, we have developed tools and systems that allow us to complete water and sewer projects with a quality level of service that is appreciated by funding agencies, owners, permitting agencies and contractors alike.

DESIGN BID BUILD PROJECTS

During a typical design-bid-build project, the first step of our process would be to meet with key stakeholders and develop an overall plan for the project, taking into consideration constraints of budget and schedule, as well as other work that may be impacted by the project. During these meeting(s), relevant project data that is available may also be collected and analyzed by our engineers to determine preliminary design options and potential layouts. Based on this information, our staff would meet with the Owner to discuss a variety of options in order to determine which solution best fits the Owner's needs and priorities, taking into account engineering recommendations we bring to the table as well.

PRELIMINARY DESIGN

This phase will typically kick off by meeting with key stakeholders to develop an overall plan for the project, taking into consideration constraints of budget and schedule, as well as other work that may be impacted by the project. During these meeting(s), relevant project data that is available may also be collected and analyzed by our engineers to determine preliminary design options and potential layouts.

The project will begin with a preliminary design (planning) phase. During this phase, we will visit each site to collect survey information on the existing conditions including the location of existing utilities through PUPS and communications with the Owner. Preliminary project plans and specifications will be developed and all required information will be provided to the funding

agency as needed for processing on their end. Meetings will be held with the Owner as necessary to identify any special needs or concerns. We will subcontract with Nesbitt Surveying Company as needed to complete project surveying. Wetlands delineation will also be completed during this phase.

FINAL DESIGN

During this phase permit application packages will be assembled including all required plans, maps, calculations, forms and specifications. Permits may include but not be limited to SC DHEC Construction and Stormwater, as well as DOT encroachment permits. While the permitting agencies are performing their review, the Owner will also have time to review the plans and provide comments. Once we have received comments back from the Owner, we will work on completing the bid plans and specifications which will be the basis for the contractors who will be bidding on the project.

We pride ourselves in developing plans that are easy for the contractors to read and understand and in writing our specifications and plan notes in ways that minimize the potential for change orders due to miscommunications. A final takeoff will also be performed to identify all bid line items and quantities. This phase would conclude with receiving approved permits, approval of bid plans from the Owner and a final review by the Chief Engineer, Michael Hanna.

BIDDING & AWARD

The next phase would involve advertising the project for bids and awarding bids to a contractor. The first step would be to prepare bid advertisements which are typically put in The State and SCBO. Throughout the duration of the advertisement, we would provide plans and specs to interested contractors and suppliers and would answer any questions that arise. We would then hold a bid opening with the Owner and would put together a recommendation to award package for the Owner to review. We typically receive a great bid response to water line projects and have developed relationships with many contractors that do this type of work in the Carolinas. Once the Owner selects the contractor, we would issue a notice of award and prepare contract documents.

CONSTRUCTION

The final phase is the construction phase. One of the initial activities during this phase is to hold a preconstruction conference between the Owner, the contractor and any other key stakeholders (e.g., COG, funding agency, etc. as applicable) in order to address questions and discuss a variety of project details. Among other things, this allows the Engineer, Contractor and Owner to talk through the construction process and identify any potential obstacles or concerns. It also provides a convenient time to execute and disseminate the contract documents. This phase also includes shop drawing review—a process that involves the project engineers reviewing cut sheets for materials to be used on the project to make sure they comply with the plans and specifications. Once construction begins, we will be onsite regularly to observe construction. It is our opinion that stopping by a jobsite once per week during construction is insufficient and is not true

construction observation. During construction observation, we document the project progress by making notes on the plans and other forms as well as through photo documentation, which occasionally involves drone photography. Using this information, we are able to keep the Owner up-to-date on construction activities as the project engineer and field staff continually monitor construction methods and materials to verify compliance with the bid documents. We will also monitor pay items and produce pay estimates for the Owner and Contractor to execute based on actual work completed. Towards the end of the project, we will develop punch lists and obtain waiver of liens and warranty letter information from the contractor. Once construction is complete, an engineer's certification package will be assembled and submitted to DHEC in order to obtain the Permit to Operate (PTO).

POST CONSTRUCTION

Following construction, we will assist the Owner with project closeout, including all paperwork required by any funding agencies that may be involved in the work. As-built documents will also be completed and provided to the Owner.

The list of activities described under each phase above is not intended to be exhaustive but should provide a general overview of services we provide during each phase.

GENERAL/SPECIAL/AS-NEEDED PROJECTS

For projects that do not involve the typical phases described in the previous section, we would follow a general approach that we have developed which is flexible enough to be adapted to most requests. This approach involves the following 7 steps:

Collecting information from the Client and other relevant sources as needed.
Clarifying what that information is, why it matters and what it's telling us.
Verifying with the Client that we have an accurate understanding of their request and needs.
Organizing the information into our system for efficiency and effective use moving forward.
Planning the tasks required to achieve the desired outcomes or deliverables.
Executing the tasks that have been identified.
Managing the project components. This involves not only project management and planning as far as budget and schedule is concerned, but also repeating the earlier steps above as needed while the project moves forward.

PROJECT TEAM MANAGEMENT & EXPERIENCE

One of the most valuable assets that any company can obtain is the employees. Hanna Engineering consists of fourteen of the best that can be found in this area. Each was selected for their unique list of technical capabilities, as well as their ability to work effectively as a team and provide quality service to our clients. Each of our employees will leverage their skillset and unique perspective to make this project a success.

Maintaining the Project Team – Hanna Engineering is proud to have a very low turnover rate, especially for key project personnel. In addition to some of our staff having worked together for decades, the team assigned to handle these types of projects consists of key personnel that has been with the company for 7 to 9 years. This creates a very stable, predictable and efficient environment for serving our clients.

Project Management & Staffing Configurations– One of the keys to getting projects completed in a timely and cost-efficient manner, is effective project management and resource allocation. Using custom task management and resource allocation tools that we have developed internally, these projects would be carefully managed from start to finish.

The way our project teams are typically organized involves a single Team Leader who is responsible for planning and managing the project at a high level. The Team Leader is supported by other engineers and support staff that help execute project tasks each week. Each team leader also has a weekly meeting to review his or her projects, which allows for a weekly check-in to evaluate the progress and direction of the project and to recalibrate as needed.

Most of our firm's workload is in the form of repeat business from long-term clients. This is a testament to our team's ability to adapt to varying workloads and meet project schedule and budget constraints. Having grown substantially over the past 7 years, our Firm and staff have been able to adjust and leverage effective management tools and approaches to help meet our client's expectations.

All project team members are based primarily out of the Florence, SC office except for Ryan Hayes who works out of our Myrtle Beach office.

Michael H. Hanna – President / Chief Engineer

REGISTRATIONS

Registered Professional Engineer since 1987
South Carolina Registration No. 11963
North Carolina Registration No. 42411

PROFESSIONAL AFFILIATIONS

National Society of Professional Engineers
South Carolina Society of Professional Engineers
State President 2007 – 2008
State Board of Directors 1999 – 2006
Chapter President 1998 – 1999, 2009 – 2010
Water Environment Federation
5S Society 2006 – Present
Water Environment Association of South Carolina
District Chairman 1999 – 2000

EDUCATION

Bachelor of Science in Civil Engineering, 1983
Clemson University – Clemson, South Carolina

RESPONSIBILITIES

July 2013 – Present
Hanna Engineering, LLC – Florence, South Carolina
Responsible for all phases of development on various water and sewer projects including, but not limited to the preparation of preliminary engineering reports, construction plans and specifications, design calculations, construction management and operations assistance. These projects have also involved the coordination of the project activities with State and Federal regulatory and funding agencies including the analysis of water and sewer rates and project funding.

September 1995 – June 2013
B.P. Barber & Associates aka URS Corporation – Florence, SC
Same responsibilities as listed above as well as Regional Vice President.

July 1983 – September 1995
D.C. Barbot & Associates – Florence, SC
Started as Field Inspector and became Project Engineer in charge of various water and sewer projects.

PROJECT EXP.

Planning, design, bidding & award and construction observation on each of the following types of projects (including but not limited to): water line extension, water line replacement, sewer line rehabilitation, sewer line replacement, sewer line extensions, wastewater pump stations (new and rehab), force main repairs, replacements, water treatment plant improvements, wastewater treatment plant improvements, water system evaluations, sewer system evaluations, water tank rehabilitation, new water storage tanks, water meter replacement, utility relocations, well rehabilitation and new well construction.

CLIENTS

A partial list of regional clients is listed as follows: Andrews, Bennettsville, Bethune Rural Water Company, Brown's Ferry Water Company, Clio, Cayce, Conway, Darlington Co. Water, Dillon, Dillon County, Denmark, Dorchester Co Water, Elloree, Florence, Florence Co., Georgetown, Georgetown RCWD, Hartsville, Hemingway, Jefferson, Johnsonville, Lake View, Lamar, Lake View, Lake City, Latta, Laurens Co. Water, Loris, Marco Rural Water, Marion, McColl, Mullins, Nichols, Olanta, Pamplico, Sellers, St. George, Stuckey, Timmonsville, Turbeville, Walterboro, West Columbia and Williamsburg County.

Ryan Hayes – Project Manager

REGISTRATIONS

Registered Professional Engineer since 2006
South Carolina Registration No. 24726

PROFESSIONAL AFFILIATIONS

South Carolina Society of Professional Engineers
Water Environment Association of South Carolina

EDUCATION

Bachelor of Science in Civil Engineering, 2000
Clemson University – Clemson, South Carolina

RESPONSIBILITIES

January 2015 – Present
Hanna Engineering, LLC – Florence, South Carolina
Responsible for all phases of development on various water and sewer projects including, but not limited to the preparation of preliminary engineering reports, construction plans and specifications, design calculations, construction management and operations assistance. These projects have also involved the coordination of the project activities with State and Federal regulatory and funding agencies including the analysis of water and sewer rates and project funding.

July 2013 – January 2015
Grand Strand Water & Sewer Authority – Conway, SC
Engineering Manager & Capital Projects Manager.

September 2012 – July 2013
City of Myrtle Beach – Myrtle Beach, SC
Worked as the City's Civil Engineer reviewing plans and designing CIP projects.

May 2009 – September 2012
BP Barber/ URS – Florence, SC
Responsible for designs, permitting, and administration of various water and sewer projects.

June 2002 – May 2009
Venture Engineering, Inc. – Conway, SC
Responsible for designs, permitting, and administration of various land development projects. Started as Project Manager and was named Vice President in 2007.

PROJECT EXP.

Planning, design, bidding & award and construction observation on each of the following types of projects (including but not limited to): water line extension, water line replacement, sewer line rehabilitation, sewer line replacement, sewer line extensions, sewer PS (new and rehab), force main repairs/replacements, water and wastewater treatment plant improvements, system evaluations, new water storage

tanks, water meter replacement, utility relocations, well rehabilitation and new well construction.

CLIENTS

A partial list of regional clients is listed as follows: Bennettsville, Bethune Rural Water Company, Cayce, Conway, Dillon, Dillon County, Florence, Florence County, Hartsville, Hemingway, Johnsonville, Lamar, Latta, Loris, Marco Rural Water, Marion, McColl, Mullins, Nichols, Olanta, Pamplico, West Columbia.

Jamie H. Buddin – Construction Manager

REGISTRATIONS

Certified Engineer-in-Training
South Carolina No. 15172

EDUCATION

Bachelor of Science in Civil Engineering, 2001
Clemson University – Clemson, South Carolina

RESPONSIBILITIES

July 2013 – Present
Hanna Engineering, LLC – Florence, South Carolina
Responsible for all phases of development on various water, sewer, stormwater, utility relocation and site development projects. Duties include field surveying, preliminary project studies, cost estimations, construction plans and specifications, design calculations, permitting and construction management.

June 2005 – July 2013
B.P. Barber & Associates aka URS Corporation – Florence, South Carolina
Same responsibilities as listed above.

January 2002 – May 2005
City of Greensboro Stormwater Management Division – Greensboro, North Carolina
Responsibilities included review of site/subdivision plans for functionality and compliance with local/state ordinances/regulations and manuals. Design/review of best management practices such as Detention Ponds, Sand Filters, and other stormwater management devices. Also served as Certified Floodplain Manager for the City.

2000 – 2001
Clemson University Planning Department – Clemson, South Carolina
Responsibilities included performing as-built survey for campus atlas, drafting survey information with AutoCAD, and staking various construction projects.

1999 – 2001
Nesbitt Surveying Company – Timmonsville, South Carolina
Responsibilities included operating instruments/levels. Performing boundary/topo surveys, as-built surveys, and construction staking for various projects of all types.

PROJECT EXP.

Planning, design, bidding & award and construction observation on each of the following types of projects (including but not limited to): water line extension, water line replacement, sewer line rehabilitation, sewer line replacement, sewer line extensions, wastewater pump stations (new and rehab), force main repairs, replacements, water treatment plant improvements, wastewater treatment plant improvements, water system evaluations, sewer system evaluations, water tank rehabilitation, new water storage tanks, water meter replacement, utility relocations, well rehabilitation and new well construction.

CLIENTS

A partial list of regional clients is listed as follows: Andrews, Bennettsville, Bethune Rural Water Company, Browns Ferry Water Company, Camden, Cayce, Dillon, Dillon County, Elloree, Florence, Florence Co., Georgetown, Georgetown RCWD, Hartsville, Hemingway, Jefferson, Johnsonville, Lamar, Latta, Loris, Marco Rural Water, McColl, Mullins, Nichols, Olanta, Pamplico, Sumter, Timmonsville and West Columbia.

Colton Cauthen – Project Engineer

REGISTRATIONS

Registered Professional Engineer since 2017
South Carolina Registration No. 34091

PROFESSIONAL AFFILIATIONS

National Society of Professional Engineers
South Carolina Society of Professional Engineers
Water Environment Association of South Carolina
- District Chair 2017 – 2019
- Engineer of the Year – 2017
- District Chair Elect 2016 – 2017
- District Vice Chair 2015 – 2016

EDUCATION

Bachelor of Science in Civil Engineering, 2012
Clemson University – Clemson, South Carolina

RESPONSIBILITIES

July 2014 – Present
Hanna Engineering, LLC – Florence, South Carolina
Responsible for all phases of development on various water, sewer, stormwater, utility relocation and site development projects. Duties include field surveying, preliminary project studies, cost estimations, construction plans and specifications, design calculations, permitting, construction management and tank coating and construction inspections.

January 2013 – July 2014
Vulcraft – Florence, South Carolina
Responsibilities included performing structural design calculations for roof and floor systems, communicating design with structural detailers, and working with contractors during the construction phase of projects.

August – December 2009, May 2010 – July 2011
BP Barber & Associates aka URS Corporation – Florence, South Carolina
Responsibilities included GIS mapping, design calculations, field surveying, and cost estimations in the area of water and sewer development and rehabilitation.

PROJECT EXP.

Planning, design, bidding & award and construction observation on each of the following types of projects (including but not limited to): water line extension, water line replacement, sewer line rehabilitation, sewer line replacement, wastewater pump stations (new and rehab), force main replacements, water treatment plant improvements, wastewater treatment plant improvements, water system evaluations, sewer system evaluations, water tank rehabilitation, new water storage tanks, water meter replacement, utility relocations, and new well construction.

CLIENTS

A partial list of regional clients is listed as follows: Andrews, Bennettsville, Bethune Rural Water Company, Camden, Cayce, Denmark, Dillon, Dillon County, Georgetown, Georgetown Rural Community Water District, Elloree, Florence, Florence Co., Hartsville, Hemingway, Jefferson, Johnsonville, Lamar, Latta, Loris, Marco Rural Water, McColl, Mullins, Nichols, Olanta and Pamplico.

SIMILAR PROJECT EXPERIENCE

OUR CLIENTS & WORK

The mission of Hanna Engineering is to serve clients in South Carolina with local, professional engineering services that they can count on. We pride ourselves in working not just *for* our clients but *with* them. As a result of our consistent delivery of reliable, high quality engineering services, our company has grown and experienced a tremendous amount of repeat business.

Since its inception, Hanna Engineering has focused primarily on serving small to moderate sized cities and towns in South Carolina by providing engineering consulting services on water and sewer projects as both an on-call engineer as well as for many construction projects. Most of the projects we have worked on have construction costs between $300,000 to $1,000,000. With few exceptions, services on each project have included the following activities/phases: funding procurement, planning, design, permitting, bidding & award, construction administration & observation, post-construction services and funding coordination. Roughly 25-30% of our workload consists of on-call, indefinite delivery contract style work where our clients utilize us as needed to handle any engineering needs that arise in the course of operating, maintaining and growing their water, sewer and stormwater systems.

Hanna Engineering also has extensive experience with the funding acquisition, design, permitting, construction observation and administration on projects funded through local, state and federal funds including, RIA, CDBA, RD, Florence County Penny Tax, SRF, FEMA and SC EMD.

WATER SYSTEM PROJECTS & EXPERIENCE

Over the past several years, Hanna Engineering has performed the design, bidding and construction observation on **more than 60 water projects** including water line, tank, water treatment plant and well projects, totaling more than 500,000 linear feet of water lines installed. Most of these projects were for small to medium sized municipalities. These projects demonstrate our familiarity with the design, permitting, bidding and construction of municipal projects as well as with water distribution system planning and maintenance. The Chief Engineer, Mr. Hanna, has been designing and overseeing the installation of water lines in South Carolina for nearly 4 decades and brings invaluable experience to the table. Our staff has served as the 'on-call' engineer for small water systems in South Carolina for many years and have extensive knowledge and experience in the field.

SEWER SYSTEM PROJECTS & EXPERIENCE

Hanna Engineering has performed the design, bidding and construction observation on **more than 60 sewer projects** in recent years, including work on wastewater treatment facilities, pump stations and gravity sewer systems. As with our water projects, these have been almost entirely with small to medium-sized municipalities in South Carolina. Our staff have spent years—in some cases decades—working on inventory, design, construction observation, permitting, evaluation

and planning for sewer systems. As a result, we have extensive knowledge and experience in the field.

EXAMPLE PROJECTS

Bennettsville Water Line Upgrades

This project included water line upgrades in multiple residential areas across the City of Bennettsville. These areas were all served with old 2" galvanized steel water lines, with the exception of one road which had a combination of 4" and 6" asbestos cement (AC) water lines. The project replaced these old lines with new 6" PVC water lines, totaling approximately 10,600 linear feet of new water lines. The project was funded through RIA and had a total construction cost of $382,572. Our services covered the scope development, funding procurement, all phases of design, permitting and bidding, and construction observation and administration. This project was completed with a less than 1% change order deduct in the City's favor. The City was very pleased with our performance on this project and has continued to use our services for all water line projects since then.

Contact: Mike Belcher
Email: Mike.Belcher@bennettsvillesc.com

Latta Downtown Water Line Replacement

This project consisted of replacing old 2" water lines along three residential streets in the Town of Latta. The project replaced the old lines with new 6" PVC water lines, totaling approximately 5,233 linear feet of new water lines. The project was funded through RIA and has a total construction cost of $540,416. This project is currently being closed out. Our services covered the scope development, funding procurement, all phases of design, permitting and bidding, and construction observation and administration. The Town has been very pleased with our services and we currently have two more water line projects with the Town, one of which is beginning construction while the other is in the final design phase. This project was located in a residential area and involved the replacement of approximately 4,000 linear feet of existing 1.5" and 2" galvanized steel water lines with new 6" PVC water lines. The existing lines were 60-100 years old and in desperate need of being replaced. A grant was obtained through CDBG in the amount of $415,325 and the project was designed and bid. The project was bid and awarded in the amount of $419,529—just $4,204 over the available funding amount. Our services covered the scope development, funding procurement, all phases of design, permitting and bidding, and construction observation and administration. The project was completed with only one change order, which was a minor price deduction in the City's favor. We communicated with CDBG throughout the project and assisted with the project closeout as well. The City was very pleased

with our performance on this project and has continued to use our services for all water line projects since then.
Contact: Jarett Taylor
Email: jrtaylor98@aol.com

Johnsonville Vox Water System Improvements

This project consisted of contracts for a new elevated storage tank, well, water treatment plant and more than 80,000 LF of water lines up to 12" in diameter. The project was funded through RIA and a local County fund and had a total construction cost of $3.9M. The project was completed in 2018. Our services covered the scope development, funding procurement, all phases of design, permitting, bidding, and construction observation and administration.

Contact: Troy Gaskins
Email: tgaskins@cityofjohnsonville.com

Dillon WWTP Influent Gravity Sewer Replacement (RIA)

This project involved the replacement of a badly deteriorated 30" Ductile Iron Pipe with large diameter concrete manholes. This section of piping conveys all of the sewer flow from the entire sewer system of the City to the Little Pee Dee WWTP. This section of gravity sewer line was in service for over 32 years however, was extremely susceptible to the corrosion associated with the hydrogen sulfide gas. Next, an in depth analysis of the available options was completed in the preliminary engineering report phase of development which included cured in place pipe (CIPP) technology, pipe bursting rehabilitation technology and full gravity sewer line replacement. It was determined that this project was the best candidate for complete replacement with new PVC piping using open cut/ trench excavation methods. This method required a complex temporary bypass pumping plan to ensure the Contractor and City staff was well informed of the flowrates and had ample time to respond if an issue were to arise. Wetlands delineations and field surveys were completed to obtain wetland boundaries, existing site elevations, manhole depths, manhole conditions, gravity sewer inverts and any potential obstacles to successful construction. Next, project plans and specifications were developed and permitting was obtained from SCDHEC and ACOE. Our team has worked closely with DHEC and SCDOT for many years and we have established a great relationship with both. Once all permits were received and design was finalized, the project was bid, awarded and construction began. During construction, our field

representative monitored construction closely, ensuring that all work was performed according to the project plans and specifications and providing guidance to contractors on any unexpected issues that arose. This project was completed successfully in 2020 with one change order (0.4%). Total construction cost was approximately $539,000.
Contact: Glen Wagner
Email: gwdillon@bellsouth.net

Bennettsville Shady Rest Sewer System Upgrades (CDBG)

This project involved replacing approximately 4,000 LF of old tar paper (Orangeburg) and clay gravity sewer lines with new 8" HDPE pipe. The existing lines were cracking and breaking down and were a known source of inflow and infiltration in the sewer system. Some of the sewer lines to be replaced were at the edge of the road, while other lines were located directly in the center of the road. After comparing the available options for replacing/rehabilitating these sewer lines, it was determined that this project was a good candidate for pipe bursting, which prevented the Town from having to pay for costly resurfacing/ paving of the roadways. This project was located on low-traffic residential roads in a low-income neighborhood. Field surveys were completed to obtain manhole depths, manhole conditions, gravity sewer inverts and any potential obstacles to successful construction. Next, project plans and specifications were developed and permitting was obtained from SCDHEC, SCDOT and USACE. Once all permits were received and design was finalized, the project was bid, awarded and construction began. During construction, our field representative, Russell White, monitored construction closely in order to ensure that all work was performed according to the project plans and specifications. Where trenches were dug for pipe bursting entry and exit pits, sidewalks and roadways were resurfaced at the end of the project. Post-rehabilitation sewer line videos were also reviewed in detail to verify quality of all rehabilitation work. All design, bid and inspection work was performed in-house, primarily by Jamie Buddin, Michael Hanna, Ryan Hayes, Boyd Huggins and Russell White. The selected pipe bursting technology worked well in this application and the City was very pleased with the resulting project. This project was completed successfully in 2017 with a net decrease change order (0.2%). Total construction cost was approximately $412,000.

Contact: Mike Belcher
Email: Mike.Belcher@bennettsvillesc.com

Hartsville Prestwood Sewer Rehab

This project involved replacing approximately 2,700 LF of old tar paper (Orangeburg) gravity sewer lines with new 8" HDPE pipe. The existing lines were cracking and breaking down and were a known source of inflow and infiltration in the sewer system. Some of the sewer lines to be replaced were at the edge of the road, while other lines were located directly in the center of the road and another went across a grassed area under the tennis courts in the County Club area. After comparing the available options for replacing/ rehabilitating these sewer lines, it was determined

that both pipe bursting and cured in place pipe would be appropriate technologies. The pipe bursting was selected for the pipe along or under the roadways, while cured in place piping was proposed for the sewer line running under the Country Club site. This prevented the Town from having to pay for costly resurfacing/ paving of the roadways, while preserving the function and beauty of the Country Club grounds. This project took place in a very prestigious neighborhood in Hartsville where the citizen complaints would not be tolerated. Field surveys were completed to obtain manhole depths, manhole conditions, gravity sewer inverts and any potential obstacles to successful construction. Next, project plans and specifications were developed and permitting was obtained from SCDHEC and SCDOT. Once all permits were received and design was finalized, the project was bid, awarded and construction began. During construction, our field representative, Russell White, monitored construction closely in order to ensure that all work was performed according to the project plans and specifications. Where trenches were dug for pipe bursting entry and exit pits, sidewalks and roadways were resurfaced at the end of the project. Post-rehabilitation sewer line videos were also reviewed in detail to verify quality of all rehabilitation work. The selected pipe bursting technology worked very well in this application and the City was very pleased with the resulting project. This project was completed successfully in 2017 with a net decrease change order (1.0%). Total construction cost was approximately $346,000.

Contact: Sam Hall
Email: sam.hall@hartsvillesc.gov

Darlington Southwest Drainage Improvements

This project has a construction cost of approximately $2,600,000. Hanna Engineering (HE) provided engineering services for the design, permitting, bidding/award and construction administration/observation of the project. It involved the installation of approximately 5,200 linear feet of storm drain piping. One of the unique features of this project is a 48-inch diameter steel casing that was bored beneath a roadway and railroad track to contain the new 36-inch storm drainage pipe. HE has a licensed drone pilot on staff and often utilizes drones during construction observation to get different perspectives of the project. This project has just recently been completed. Key personnel involved were Mike Hanna, Ryan Hayes, Jamie Buddin and Colton Cauthen.

Contact: Howard Garland
Email: HowardGarland@email.com

PROJECT FUNDING

The staff of Hanna Engineering have been actively involved in most, if not all relevant funding programs in South Carolina. This includes SCIIP, CF, SCOR, SCEMD, SRF, CDBG, RIA and RD. In the past few years, we have secured over $61,000,000 for our clients through 69 projects which we have also gone on to perform the design, bidding & award and construction observation and administration on. Consequently, we are very familiar with the process and requirements from start to finish on federally funded projects. Our staff have been praised by COG, for example, for being great to work with due to being highly organized, proficient and having a high level of familiarity with the process and requirements associated with these funded projects.

We also just recently helped many of our clients with pulling together applications for the SCIIP funding being administered through RIA. Overall, we assisted our clients in applying for more than $70 million in funding within a very short timeframe allowed by the funding agency. Awards for these grants will be announced in the spring of 2023 and could nearly double the total funding we have helped secure for our clients in recent years.

Below is a partial list of projects Hanna Engineering has assisted clients with securing funding on in recent years, organized by funding program and year of award.

CDBG Grant Program:

2013
Dillon –W&S Improvements
Pamplico – Pembrook Sewer
McColl – Influent PS & Gravity Sewer
Hartsville – Oakdale Sidewalks
Olanta – Well & WTF
Bennettsville – Sewer System

2014
Olanta – Well & WTF
Bennettsville – Sewer System

2015
Andrews – Pump Station Upgrades
Bennettsville – Shady Rest Sewer
Hemingway – PS Upgrades
McColl – Influent PS & Force Main
Olanta – Hood Street Water Line
Williamsburg County – St. Mark Area WLs

2016
Hemingway – WWTP PS
Hartsville – Marion St. Sidewalk

2018
Johnsonville – W&S Improvements
Bennettsville – Influent Sewer Line

2019
Hartsville – Southpark PS

2020
Hemingway – Flanagin Branch Sewer

2022
Bennettsville – Firestone Area Sewer Upgrades
Latta – South Latta Sewer Upgrades

RIA Grant Program:

2013
Bennettsville – Knollwood Acres Water Lines
Hartsville – Black Creek FM
Hemingway – WWTP Upgrades
Latta – Bethea PS & FM

2014
Dillon – PS Improvements
Lamar – Well and Control Valve
Olanta – PS Improvements

2015
Andrews –Sewer Upgrades
Bennettsville – WL Upgrades
Johnsonville – Vox Water Tank

2016
Andrews – Agru W&S Upgrades
Darlington – Storm Drain Upgrades
Hartsville –PS Improvements
Loris – Bayboro PS Improvements

2017
Dillon – WWTP Influent GS
Hemingway – ECA Well Upgrades
Jefferson – WWTP Improvements
Lamar – Water Tank Rehabilitation
Latta – Hwy 301 Utility Relocation
Pamplico – Tank & WTP Upgrades
McColl – Water System Upgrades

2018
Bennettsville – Sewer System Upgrades
Latta – Downtown WL Improvements

2020
Hartsville – Smith Street Well

2021
Bennettsville – Glen St. Area Water System Improvements

2022
Jefferson – Downtown Water Lines

SRF Grant/Loan Program:

2013
Pamplico – Hyman Elevated Water Tank
Pamplico – Shirley Road Water Line

2014
Dillon – Hwy 301 FM Relocation

2015
Dillon – Elevated Water Tank, Water Lines and Control System
Olanta – Elevated Water Tank
Pamplico – WWTP Improvements

2015
Dillon – Elevated Water Tank, Water Lines and Control System
Olanta – Elevated Water Tank
Pamplico – WWTP Improvements

2017
Hemingway – New Well & WTP
Latta – New Water Tank
Dillon – Hwy 9 Force Main

2018
Bethune – Generators
Pamplico – Water Treatment Facility Improvements

2020
Hartsville – Smith Street Well
Bethune – Tank Rehab
Hartsville – Northrup King Bypass Pumps
Jefferson – Sewer System Evaluation
Jefferson – Influent PS Generator
Hemingway – Industrial Park Generator

2022
Jefferson – Downtown Water Lines
Bennettsville – Sewer System Evaluation
Hemingway – Hwy 261 Water Line
Hemingway – Planning Study

USDA RD Grant/Loan Program:

Bethune Water Meter Replacements
Hartsville Water Meter Replacements
Williamsburg Co. Meter Replacements
Hemingway W&S Improvements
Latta New Water Tank
Latta W&S Improvements
Andrews W&S Improvements
Browns Ferry Water Improvements
Marco Water Improvements

GENERAL INFORMATION

Hanna Engineering was formed in July 2013 by Michael H. Hanna, P.E., who is the sole owner and Chief Engineer in the company, which is organized as a Limited Liability Corporation.

Mr. Hanna is a native of South Carolina and was raised in Johnsonville before going to Clemson University to obtain a degree in Civil Engineering. He returned to the Pee Dee area and began working in the engineering consulting field with a focus on municipal water and wastewater service providers. Mr. Hanna served as a Vice President and Branch Manager for several years and then formed his own consulting firm, Hanna Engineering. Shortly after its establishment, Mr. Hanna made offers of employment to four of his previous colleagues and Hanna Engineering began its quest to becoming a leading provider of engineering consulting services in the Pee Dee and surrounding areas.

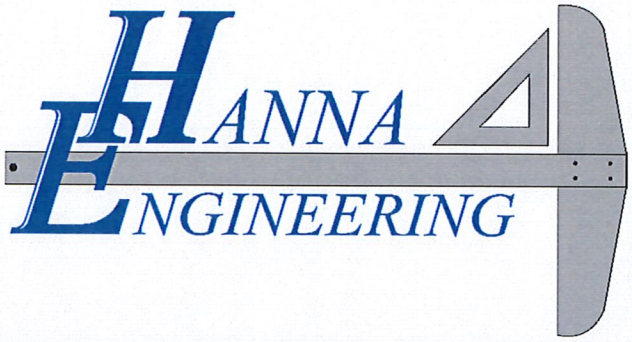
Since that time, Hanna Engineering has tripled in size from an initial 5 employees to 14 employees currently. The number of clients served by Hanna Engineering has consistently grown as well due to the value and consistency of services we deliver.

OFFICE LOCATIONS

The primary office is located at 2412 Pisgah Road in Florence, SC. The physical location of the 10,000-square foot main office is 0.9 miles west of Interstate 95. **This will be the primary office conducting the projects**. The primary contact information for our office is:

Main Contact: Michael H. Hanna
Hanna Engineering, LLC
2412 Pisgah Rd.
Florence, SC 29501
www.hannaengineering.com
843-628-6800

Our satellite office is located at 10838 Kings Road in Myrtle Beach, SC. The office is located in the Myrtle Beach Business Center adjacent to the Bass Pro Shop.



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